RS650-2

JAPAN · ECONOMIC · INSTITUTE

JEI

REPORT

A Two-Part Report: A and B

NO. 39A October 12, 1990

SOCIAL OVERHEAD CAPITAL IN JAPAN

Summary

As part of the recently concluded Structural Impediments Initiative talks with Washington, Tokyo promised to channel Y430 trillion or $3 trillion-plus into public investment between FY 1991 and FY 2000. Increased public spending on infrastructure is expected to narrow Japan's savings-investment gap and, thus, help reduce the country's big current account surplus. More important from a domestic standpoint, it will improve living conditions in Japan, which fall short of the physical environment of most other industrial countries.

While Japan can afford to expend Y430 trillion on social and economic infrastructure over the next decade, the government has to weigh annual outlays against projected yearly budget revenues and the potential impact of stepped-up public investment on inflation and the current labor shortage. Coordination among the many government ministries and agencies involved in public works and cooperation between the central government and local authorities will be necessary to make the best use of the extra money earmarked to improve the quality of life in Japan.

Public Investment and the SII Talks

Japan's towering 1987 current account surplus of $87 billion had been trimmed by more than a third by last year, but even with another big cut this year to perhaps $40 billion and maybe less, the difference between the country's exports and imports of goods and services (including investment income) remains huge. The reason is simple, at least for economists: savings in Japan,

whether by individuals, businesses or the government, far exceed private and public investment at home. Reducing this difference, primarily by persuading Tokyo to spend more money on Japan's inadequate social infrastructure -- housing, parks, sewer systems and the like, was one of Washington's six major objectives in the Structural Impediments Initiative talks. The yearlong SII exercise, which was completed in late June, aimed at addressing the underlying causes of the enormous U.S.-Japan trade imbalance. (For a summary of the final SII report, see JEI Report No. 24B, June 22, 1990.) While bridging Japan's savings-investment gap might have various implications for the United States -- some of them less than positive (see JEI Report No. 14B, April 6, 1990), the proposed benefits to the average Japanese citizen of higher government expenditures for social infrastructure helped sell the SII package there.

Japan's high savings rate stems primarily from the robust efforts of individuals. The money put aside by Japanese equaled anywhere from 13.7 percent of nominal gross national product (FY 1987 and FY 1988) to 17.1 percent (FY 1980), as measured by the Economic Planning Agency (see Table 1). The government also became an increasingly big saver in the second half of the 1980s, primarily because of the buildup of the social security trust fund. On the investment side, the corporate sector's normally healthy spending on plant and equipment (15 to 17 percent of GNP) picked up some steam in the last years of the 1980s, hitting 19.6 percent in FY 1988, for example. Both individual and

Table 1: Japan's Savings-Investment Balance, FY 1980-FY 1988

(as percent of GNP)

	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987	FY 1988
Private Sector									
Savings	28.7%	27.8%	26.4%	27.1%	26.4%	26.7%	26.8%	24.8%	25.0%
Household	17.1	17.0	15.6	15.7	15.2	15.0	14.9	13.7	13.7
Corporate	11.5	10.8	10.8	11.4	11.2	11.7	11.9	11.2	11.4
Investment	25.1	23.9	22.9	21.8	22.5	22.7	22.2	23.4	24.9
Household	7.9	7.2	7.4	6.5	6.3	5.1	5.3	5.9	5.3
Corporate	17.2	16.7	15.6	15.3	16.2	17.6	16.9	17.5	19.6
Net Balance	3.6	3.9	3.4	5.3	3.9	3.9	4.6	1.4	0.1
Government Sector									
Savings	3.1	3.3	3.3	3.4	4.0	4.9	5.4	7.2	9.0
Investment	7.1	7.0	6.7	6.3	5.8	5.6	5.7	6.2	6.1
Net Balance	-4.0	-3.7	-3.4	-3.0	-1.8	-0.8	-0.3	1.0	2.9
Domestic Savings-Investment Balance	-0.4	0.2	0.0	2.3	2.1	3.1	4.2	2.4	3.0
Current Account	-0.6	0.5	0.8	2.0	3.0	3.8	4.5	3.3	2.7

Source: Economic Planning Agency

The JEI REPORT (ISSN 0744-6489) is published weekly except for the New Year, Memorial Day, Labor Day, Thanksgiving and Christmas holiday weeks for $40 per year by the Japan Economic Institute of America, 1000 Connecticut Avenue, N.W., Washington, D.C. 20036. Second class postage paid at Washington, D.C. POSTMASTERS: Send address changes to JEI REPORT, 1000 Connecticut Avenue, N.W., Washington, D.C. 20036.

government investment, however, slipped in relative terms over the course of the decade. By the fiscal year ending in March 1989 business investment topped corporate savings by 8.2 percent of GNP, while consumers and the government had excess savings equivalent to 8.4 percent and 2.9 percent of national output, respectively. As a result, Japan's domestic savings-investment balance, which theoretically parallels its current account surplus, was 3 percent of GNP.

The Japanese government acknowledged in the SII talks that a reduction in the imbalance between domestic savings and investment in Japan is important to following through on its commitment to lower the nation's current account surplus. The Japanese SII team also recognized that Japan still lags behind the United States and many other industrialized countries in certain areas of social and economic infrastructure despite considerable public-sector investment over the 1970s and 1980s. Nevertheless, Tokyo rejected out-of-hand an early U.S. proposal to earmark the equivalent of 10 percent of Japan's GNP for public works spending during the 1990s. The same fate befell Washington's initial fallback suggestion of Y500 trillion ($3.7 trillion at Y135=$1.00) in expenditures over the next decade.

Shaping Japan's position were concerns, particularly in the Ministry of Finance, about the inflationary impact of a big jump in public investment and how this increase would be financed. After watching the outstanding public debt swell to a staggering Y162 trillion ($1.2 trillion) during the second half of the 1970s and the 1980s and interest payments soar accordingly, the government finally had achieved its long-term goal in the general account budget for FY 1990 of eliminating the use of deficit-financing bonds. While Tokyo was prepared to increase public works spending in the 1990s, MOF officials worried that boosting public investment considerably above the estimated Y263 trillion ($2 trillion) spent between FY 1981 and the current fiscal year might jeopardize the expected critical turnaround in the government's finances.

In March 1990, moreover, an advisory council to the Finance Ministry had recommended further efforts to shrink Tokyo's debt albatross down to size, including: reducing issues of bonds -- expected to consist solely of what are known as construction bonds -- to less than 5 percent of general account revenues by FY 1995 and redeeming outstanding deficit-financing bonds as soon as possible to cut interest payments. In essence, the MOF advisory panel suggested funding an increased portion of public works spending out of general tax revenues rather than through bond issues (see JEI Report No. 12B, March 23, 1990).

In the end, though, Tokyo was forced to put aside its worries about the budgetary and inflationary impacts of a jump in infrastructure spending because public investment, while just one of six U.S.-identified problems on the SII agenda, had become the make-or-break issue. After considerable give-and-take between the two governments in late June, Japan made a final proposal to earmark Y430 trillion ($3.2 trillion) for public investment over the FY 1991-FY 2000 period. That offer was accepted by the United States, in part because planned government outlays will be accompanied by Y25 trillion ($185.2 billion) or so in expenditures by such ex-public corporations as Nippon Telegraph and Telephone Corp. and Japan Railway Group. (Capital spending by NTT and the JR Group -- which totaled about Y24 trillion or $177.8 billion during the 1980s -- were included under government fixed investment in the GNP statistics until these organizations were "privatized" in the mid-1980s. Now their business investment shows up under private fixed nonresidential investment.)

About 60 percent or Y258 trillion ($1.9 trillion) of projected public investment during the April 1991-March 2001 period will be channeled into projects that directly improve the quality of life in Japan, up from 50 percent-plus in the government's FY 1981-FY 1990 plan. This includes outlays for housing, water supplies, sewers, waste disposal, parks and other green spaces, local roads and subways. But expenditures for these and other forms of social overhead capital, while increasing significantly, will be backloaded in the coming 10-year period, thereby slowing the adjustment of Japan's savings-investment imbalance. Moreover, Tokyo underscored its repeated message during the SII discussions about the need for spending flexibility on a year-to-year basis by noting in the final SII report that the state of the economy would be weighed in deciding how much to allocate each year for public investment.

Japan's Social Infrastructure

Most Japanese are aware that the country's social infrastructure is inferior to that of other industrialized countries, and their reaction to the government's decision to increase public investment in the 1990s has been favorable. Although Japan ranks as the world's second-largest economic power and has one of its highest per-capita incomes, many Japanese do not feel that the quality of their life has improved in line with their growing affluence (see JEI Report No. 31B, August 10, 1990).

In terms of consumer goods the average Japanese owns as many cars and appliances as Americans or Europeans do (see Table 2). In 1989, for example, 76 percent of all Japanese families owned cars, 64 percent had microwave ovens, 63 percent had air conditioners, 63 percent had videocassette recorders and almost all had color television sets, refrigerators and telephones. Newer products like compact disk players and personal computers also are found in many Japanese homes.

Table 2: Cross-Country Comparison of Car and Telephone Ownership

(per 100 people)

	Cars*	Telephone Lines**
Japan	40	40
United States	72	48
Great Britain	41	42
West Germany	49	45
France	44	44

*1987 survey by the Japan Automobile Manufacturers Association.
**1988 survey by American Telephone & Telegraph Co.

Housing in Japan and the many other things that make up social infrastructure, however, generally are inferior to those in the United States and Europe. Table 3, an international housing comparison, indicates that among the five major industrialized countries, Japan has the lowest number of houses relative to its population and, along with France, the highest number of people

Table 3: International Housing Comparision

	Number of Houses per 1,000 People	Average Number of Rooms	Average Number of People per Room	Average Floor Space (square meters)	Housing Investment/ GNP Ratio
United States	419 (1987)	5.3 (1985)	0.4 (1985)	148.1 (1987)	5.2 (1987)
Great Britain	399 (1986)	5.0 (1981)	0.5 (1981)	-	3.7 (1987)
West Germany	448 (1986)	4.4 (1978)	0.6 (1978)	93.8 (1986)	5.1 (1987)
France	451 (1986)	3.8 (1984)	0.7 (1984)	85.5 (1984)	4.4 (1987)
Japan	342 (1988)	4.9 (1988)	0.7 (1988)	79.3 (FY 1987)	5.9 (FY 1987)

Source: Ministry of Finance

per room. To make matters worse, the average residence is smaller in Japan than in the four other countries. Moreover, in metropolitan areas, where land prices more than doubled during the last decade (see JEI Report No. 28A, July 20, 1990), housing conditions often fall short of even the poor national average. It is not hard to find families in Tokyo or Osaka who own expensive cars but cannot afford to buy houses with garages.

Similarly, public infrastructure, such as paved roads and sewage and drainage systems, has not been well-developed in Japan. As is shown in Table 4, about one-third of Japan's roads remain unpaved. While publicly supplied water mains and lines cover almost all of Japan, only two-fifths of the population was served by a municipal sewer system in the late 1980s.

Table 4: International Comparision of Public Infrastructure

	1965		1988	
	Paved Roads*			
Japan	7.4%		66.6%	
United States	39.0		90.0	(1986)
Great Britain	100.0		100.0	
West Germany	65.0	(1966)	99.0	(1986)
France	79.0		92.0	
	Hookup to Public Water Supply**			
Japan	53.4%		94.2%	
United States	93.0		99.3	(1977)
Great Britain	99.0	(1961)	99.2	(1985)
West Germany	91.0	(1963)	97.3	(1985)
France	79.0	(1962)	99.2	(1985)
	Hookup to Public Sewer System**			
Japan	6.0%		40.0%	
United States	68.0	(1962)	73.0	(1986)
Great Britain	90.0	(1963)	95.0	(1982)
West Germany	63.0		91.0	(1983)
France	40.0	(1963)	64.0	(1983)

*In terms of a country's total road network.
**In terms of a country's total population.

Source: Ministry of Finance

Although both the central government and local authorities have invested large sums over the past 20 to 30 years to improve the road network and other types of social infrastructure, Japan still lags behind the United States and Europe. Projects to construct new highways and airports and provide additional public transportation for commuters often have been held up because the people or the companies that own needed land refuse to sell or demand too high a

price. The same factors help explain why a review of public parks or green spaces in some of the world's major metropolitan areas shows the average Tokyo resident having only 23.7 square feet, while New Yorkers enjoy 206.4 square feet each, Londoners 326.8 square feet and citizens of Bonn, 402.1 square feet. Japanese city dwellers have to exercise patience whenever they venture out into the crowds to enjoy the weekend.

Y430 Trillion and the Current Account Imbalance

As noted, public investment in the 10 years through March 1991 is expected to total Y263 trillion ($2 trillion). That figure covers government fixed investment -- the number that shows up in Japan's GNP statistics -- plus the cost of land and any compensation paid to landowners to buy their property. Government fixed investment is projected at Y224 trillion ($1.7 trillion). Using these figures (see Table 5), the portion of public investment used to buy land in the FY 1981-FY 1990 period is about 15 percent. If that ratio remains constant in the coming 10-year period, the planned Y430 trillion ($3.2 trillion) in public investment will translate into fixed investment of roughly Y366 trillion ($2.7 trillion).

In terms of narrowing Japan's savings-investment gap and, by extension, its external imbalance, the Y366 trillion ($2.7 trillion) figure may have the most relevance since land purchases and compensation payments simply transfer wealth rather than absorb savings. Will spending of this magnitude over the coming decade do the job? Not according to Washington's calculations. U.S. economic policymakers had argued during the SII talks that anything less than Y500 trillion ($3.7 trillion) or its estimated counterpart, 10 percent of GNP, would do little to rectify Japan's savings-investment imbalance. Add in the likelihood that land costs, which continue to rise across Japan, will absorb more than 15 percent of the planned Y430 trillion ($3.2 trillion) in public investment and the chances for adjustment in the current account imbalance become more remote.

Martin Feldstein, former head of the president's Council of Economic Advisers, has argued that setting a high numerical target for Japan's public investment in the hope that stepped-up outlays will produce an adjustment in the current account imbalance is misguided. The planned Y430 trillion ($3.2 trillion) in public investment could fall victim to inflation, primarily rising land prices, or a robust economy and end up having a negligible impact on the surplus. Thus, he said, Japan's real interest in boosting public investment should be to improve the quality of life. That line of reasoning strikes a responsive chord among Japanese economic policy planners, who believe the link between bridging Japan's savings-investment gap and reducing the country's external imbalance is weaker than their American counterparts say.

Y430 Trillion and the Budget

Whether government fixed investment reaches 7.2 percent of GNP in FY 2000 as the Economic Planning Agency projects, the ratio is certain to be higher than the 6.3 percent estimated for the current fiscal year. That figure, while below the government fixed investment/GNP statistic for every April-March period in the 1980s, will continue to top the comparable numbers for Japan's major competitors. In 1987, for example, Japan plowed three times as much into government fixed investment as the United States did and more than two times what the West German government spent (see Table 6).

Table 5: Estimate of Japan's Public Investment

(in trillions of yen)

Fiscal Year	Public Investment (A)[1]	Government Fixed Investment (B)	Nominal GNP (C)	A/C	B/C
		Actual			
1981	Y27.5	Y24.0	Y259.7	10.6%	9.2%
1989	29.4	25.6	398.2	7.3	6.4
1990	30.2	26.3	417.2	7.2	6.3
1981-90	263.0[2]	224.0[3]			
1981-90 Average Growth Rate	1.9%	1.9%	4.9%		
		Projected			
1991	Y32.1	Y27.3	Y437.0	7.3%	6.2%
2000	55.6	47.3	663.6	8.4	7.2
1991-2000	430.0[2]	366.0[4]			
1991-2000 Average Growth Rate	6.3%	6.3%	4.75%[5]		

[1]Public investment (A) = government fixed investment (B) + cost of land purchased and compensation fee.

[2]Amount of public investment cited by the Japanese government in the final report on the Structural Impediments Initiative talks.

[3]Calculated from the national income statistics.

[4]Assuming the ratio of (A) to (B) during the 1980s (1.15:1.0) remains unchanged, government fixed investment from FY 1991 through FY 2000 is estimated at Y366 trillion.

[5]Projection contained in the government's Five-Year Economic Management Plan (1988-92).

Source: Ministry of Finance and Economic Planning Agency

Although Tokyo's planned infrastructure outlays over the next 10 years will remain high by international standards, the promised Y430 trillion ($3.2 trillion) in spending would not appear to place too much strain on Japan, given its high savings rate and recent expenditure levels. The big question now confronting the administration of Prime Minister Toshiki Kaifu is how to finance a jump of nearly two-thirds in public investment. Hoping to fund the increase from general account revenue measures already in place while allowing for growth in social security programs, education and other general account expenditures is not realistic; the government simply cannot count on a high-growth

Table 6: International Comparision of Nominal Fixed Investment/GNP Ratios

	Japan		United States		Great Britain		West Germany		France	
	Government	Private	Government	Private	Government	Private	Government	Private	Government	Private
1965	4.5	20.7	2.8	15.8	4.2	13.9	4.3	21.9	4.0	19.0
1970	4.6	27.3	2.5	15.0	4.7	13.7	4.6	20.9	3.6	19.7
1975	5.3	23.3	2.1	14.9	4.7	15.2	3.6	16.5	3.7	20.4
1980	6.1	21.9	1.7	17.1	2.4	15.7	3.4	19.0	3.1	19.8
1985	4.8	21.0	1.6	16.3	1.9	15.1	2.2	17.3	3.1	16.3
1987	5.3	22.3	1.6	15.8	n.a.	n.a.	2.4	16.9	3.1	16.3

Note: The figures for government fixed investment do not include outlays by public corporations. If this spending were included in the Japanese data, for example, the ratios would be 8.8 in 1965, 8.2 in 1970, 9.2 in 1975, 9.6 in 1980, 6.7 in 1985 and 7.0 in 1987.

Source: Ministry of Finance

economy swelling tax payments and revenues from other sources every year. Alternative sources of financing are necessary.

Raising taxes, by either hiking the rates of existing levies and/or introducing new ones, and floating more construction bonds are the obvious options. But these choices lead to the question of which generation should shoulder the burden of boosting public investment' current taxpayers or future taxpayers? Since at least part of what the government invests in infrastructure in the 1990s will benefit future generations, larger amounts of construction bonds are economically acceptable on equity grounds. As noted, though, the Ministry of Finance is loathe to increase government borrowing just when 14 years of deficit-financing have ended. Moreover, raising taxes would seem to be out of the question for the foreseeable future given the continuing debate in Japan over the consumption tax implemented in April 1989.

A much-used funding source for public investment in Japan is the Fiscal Investment and Loan Program, a capital budget financed from postal savings, the government's various pension and life insurance trust funds and borrowing. Through the FILP budget Tokyo provides long-term loans for public works projects undertaken by local governments or public organizations like Water Resources Development Corp. and Japan Highway Public Corp. Most of Japan's transportation infrastructure -- highways, bridges, the nationwide rail system, harbors and airports -- has been constructed with FILP monies. Government policy planners anticipate that a considerable part of public investment in the FY 1991-FY 2000 period will be financed through the FILP budget. But with Japanese interest rates now at their highest levels in 10 years, local governments and public organizations will have a hard time borrowing significantly more money than they did in the 1980s.

The sliding price of NTT stock over the last two years adds another complication to the public investment financing question. The government had planned to use part of the proceeds from the sale of its NTT shares to the public to provide interest-free loans through the FILP budget for public works projects. The 1986 and 1987 auctions produced the expected financial results, but NTT's weakening share price forced the government to scale back its offering in 1988 and to cancel the sale altogether in 1989. Plans for an auction this year -- when the last government-owned shares to be offered to the public originally were scheduled to be sold -- are on hold since NTT stock prices remain depressed.

Given these considerations the increase in public investment during the 1990s is likely to be funded by a combination of additional general account borrowing, a new or expanded land-related tax (see JEI Report No. 28A, July 20, 1990) and higher spending through the FILP budget, with construction bonds providing most of the extra financing. The government has some time to figure out the best mix. Determined to retain public works spending as a major countercyclical policy tool, Japan's SII team made no commitment to front-load outlays in the first half of the 1990s or even to raise spending each year by the 6.3 percent average rate needed to boost public investment to Y430 trillion ($3.2 trillion) for the FY 1991-FY 2000 period. All Tokyo told Washington was that it expected to invest approximately Y182 trillion ($1.4 trillion) in infrastructure by the midpoint of the 10-year period.

Finding the money to expand public investment in FY 1991 should not be too difficult because the rise probably will be limited to keep the economy,

which is expected to continue growing at a moderate pace, from overheating. But holding the growth in public investment below 6.3 percent will require some hard decisions by the Ministry of Finance, at least on that part of spending financed through the general account budget.

When the ceiling for FY 1991 general account budget requests was set this past summer (see JEI Report No. 30B, August 3, 1990), the cabinet of Prime Minister Kaifu incorporated two special measures to increase public investment. First, it added Y200 billion ($1.5 billion) for public works projects to the money the central government otherwise would transfer to local jurisdictions. Second but more importantly, it established a Y200 billion ($1.5 billion) fund for projects to improve the quality of life. The availability of this extra funding produced a flood of proposals from 13 ministries and agencies anxious to strengthen their bureaucratic clout. As Table 7 indicates, requests add up to more than five times the Y200 billion ($1.5 billion) available.

Table 7: FY 1991 Budget Requests for "Life-Improvement" Expenditures

Ministry	Amount (billion yen)	Use
Ministry of Construction	Y200	Sewage/drainage, housing
Ministry of Agriculture	190	Sewage/drainage in rural areas
Ministry of Transportation	173	Subways, rail system
Ministry of International Trade and Industry	159	Shopping areas (incl. parks)
Ministry of Health and Welfare	131	Water supply, garbage disposal
Ministry of Education	122	Lifetime educational promotion centers
Ministry of Posts and Telecommunications	102	Underground telecommunications lines
Other Ministries and Agencies	44	
Total	1,121	

Source: Yomiuri Shimbun, August 30, 1990.

Cooperation Among Authorities

Efficient development of social infrastructure in any country requires extensive coordination among the many government organizations funding projects that fall under this heading. Plans for new housing, for example, should take into account the need for transportation systems, water and sewage services, schools, shopping centers and parks. But this type of coordination is difficult in Japan where more than a dozen ministries and agencies are involved in public works projects. The division of responsibilities between the central government and local governments adds another complication. Municipal authorities handle many of the country's public works projects, but the bureaucracy in Tokyo generally controls the funding as well as part of the related approval process. As recently as five years ago, for example, a city needed permission from the Ministry of Transportation to move a bus stop. These two problems have prompted

many analysts to argue that efficient use of the Y430 trillion ($3.2 trillion) for public investment over the next 10 years depends on better coordination among involved central government organizations and the delegation of more power to local governments.

Changes also are necessary at the local government level, these analysts say. High on their lists are mergers among municipal districts and/or neighboring cities or towns. There are 47 prefectures, 656 cities and 2,590 towns and villages in Japan. Most of the municipal districts are too small to implement public works programs effectively. Without tie-ups, formal or informal, among local government units, transjurisdictional construction projects, such as commuter train lines and sewage/drainage systems, can get bogged down in disputes.

Furthermore, since public investment affects so many other parts of the economy, Tokyo is being urged to develop a comprehensive policy that addresses labor supplies, land prices, taxes and similar issues. If public works projects involve land purchases, for example, the government should have some means at its disposal to prevent a run-up in prices; otherwise, money that could be used for construction goes to landowners. Similarly, if labor markets are tight when public investment is on the upswing, the government must be ready to consider ways to counter the shortage of workers. A comprehensive plan also would address rural/urban migration since additional housing and transportation links in metropolitan areas never will alleviate the crowded conditions unless some way is found to stem the population movement away from rural areas.

The issue of social overhead capital in Japan obviously goes beyond the relationship between public investment and the country's current account imbalance since it highlights many important socioeconomic problems. Tackling these problems is reason enough to boost public investment.

For further information, contact Tadashi Saito.

* * * * * *

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.